

REMARKS

Claims 1-5 are pending in this application. By this Amendment, claim 1 is amended. Reconsideration based on the above amendments and following remarks is respectfully requested.

I. The Claims Satisfy the Requirements of 35 U.S.C. §112, Second Paragraph

The Office Action rejects claims 1-5 under 35 U.S.C. §112, second paragraph, as indefinite. Claim 1 is amended to obviate the rejection. Withdrawal of the rejection under 35 U.S.C. §112, second paragraph, is respectfully requested.

II. The Claims Define Allowable Subject Matter

The Office Action rejects claim 1 under 35 U.S.C. §102(a) as unpatentable over Applicant's admitted prior art (hereinafter "AAPA"); claim 2 under 35 U.S.C. §103(a) over the AAPA in view of U.S. Patent No. 4,189,821 to Potter (hereinafter "Potter"); claims 2, 3 and 5 under 35 U.S.C. §103(a) over the AAPA in view of U.S. Patent No. 4,442,586 to Ridenour (hereinafter "Ridenour"); and claim 4 under 35 U.S.C. §103(a) as unpatentable over the AAPA in view of U.S. Patent No. 4,722,619 to Reiser et al. (hereinafter "Reiser"). These rejections are respectfully traversed.

→ The AAPA does not disclose providing plastic flow to an inner peripheral surface of the hole toward an end face of an outer race of the bearing and forming a locking section on the end face of the outer race by the plastic flow for retaining the outer race of the bearing in the housing, as recited in claim 1.

Instead, the AAPA discloses, in Figures 7, 9 and 10, several embodiments of a method for retaining a bearing that does not enable the retention of a bearing without providing in advance any recesses on an inner peripheral surface of a hole or on an end face of an outer race.

Contrary to the AAPA, the present invention enables the retention of a bearing 1 regardless of an axial distance between an end face of a housing 9 and an end face of an outer race 2 without providing in advance any recesses on an inner peripheral surface of a hole or on an end face of the outer race 2.

In addition, Figs. 6 and 8 of the AAPA show plastically deformed portions 2b (Fig. 6) and 3c (Fig. 8) respectively formed by a staking tool 4, 6 for mutually retaining the outer race 2 and the housing 3. However, the retaining method of the AAPA cannot be applied in case where the axial distance between the housing 3 and the outer race 2 is not equal (depth D of the housing 3 exceeds the width W of the outer race 2) so as to be inapplicable to use of the staking tool 4 as shown in Fig. 11.

Moreover, if the wall of the housing 3 is thin, embodiments of the retaining method disclosed by Figs. 7, 9 and 10 of the AAPA cannot be applied because the recesses formed on the inner surface of the housing 3 cannot be formed. Contrary to the AAPA, an inner peripheral surface of a hole of the present invention will be subject to a plastic flow with the staking tool 10 having a diameter larger than that of the hole to make a locking section 9c. Because two pairs of the staking tools 10 are simultaneously applied from both upper and lower sides of the hole, a spherical bearing 1 can be firmly fixed to the hole of the housing 9 regardless of an axial distance of both the housing 9 and the outer race 2 as well as the thickness of the housing 9 (See paragraph [0010]).

For at least these reasons, it is respectfully submitted that claim 1 is distinguishable over the applied. Claims 2-5, which depend from claim 1, are likewise distinguishable over the applied art at least for the reasons discussed as well as for the additional features they recite. Withdrawal of the rejections under 35 U.S.C. §102(a) and §103(a) are respectfully requested.

III. Drawings


A Letter to the Official Draftsperson was filed on February 14, 2002 submitting Formal Drawings. It is respectfully requested that the Examiner consider the Formal Drawings and acknowledge receipt of the Formal Drawings with the next Office Action.

IV. Conclusion

In view of the foregoing amendments and remarks, it is respectfully requested that the application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1-5 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned representative at the telephone number set forth below.

Respectfully submitted,


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